Well-being and performance interventions: a call for more theory-based 'black box' designs.

Introduction

Although research on stress and well-being at work has made significant progress in recent decades, countries all over the world continue to see a rise in psychological and physical health problems in the workplace (Cooper, 2013). The rising incidence of mental illness and psychological problems in the workplace has been identified as the primary cause of sickness absence (Black, 2008; CIPD 2013). Conversely, meta-analytic studies have shown that overall psychological health is positively related to self and supervisor or peer rated job performance (Ford, Cerasoli, Higgins & Decesare, 2011). As such, organizations and governments are looking for evidence-based ways to prevent and address the occurrence of ill-health and to promote well-being and performance in organizational contexts. Thus far, however, compelling research evidence informing practical, innovative and effective ways to help organizations intervene remains somewhat elusive (Giga, Cooper & Faragher, 2003; Sui, Cooper & Phillips, 2014).

The special issue aimed to add to the research evidence by publishing rigorous evaluation studies of innovative organizational interventions to improve the well-being and performance of people at work. Our call for papers sought (i) evaluation studies of single interventions which are strong on methodological design and are situated in a sound theoretical or thematic base (ii) meta-analytical studies which offer significant new insights (iii) studies which link both health and performance outcomes, and (iv) studies that clearly articulate how the interventions described were conducted.

Consistent with the effectiveness and performance orientation of JOEPP, we argue that consideration of effective organizational interventions requires an explicit focus on both well-being and performance outcomes. Although well-being practitioners and researchers have often bemoaned a resistance by key organizational decision-makers to embrace or adopt well-being interventions (Nielsen, 2013; Randall, Griffiths & Cox, 2005), this is most probably because the important link between well-being and performance has not been made sufficiently explicit. Organizations are less likely to

approve, support and resource what can be time-consuming and expensive intervention programs unless there is clear evidence in support of organizational performance benefits. However, and with cause for optimism, in recent years there has been increasing recognition of the links between well-being and performance at the level of the individual, the group and the organization. Robertson, Birch and Cooper (2012) for example, showed that psychological well-being yielded incremental validity beyond positive job and work attitudes in predicting self-reported job performance. More broadly, the American Psychological Association sponsors Psychologically Healthy Workplace Awards to explicitly recognize organizations that foster employee well-being and organizational performance.

Underpinning the emerging evidence in support of the effectiveness of well-being interventions has been an increased examination and understanding of the factors that can either promote or mitigate intervention effectiveness. The World Health Organization, through the PRIMA-EF project (Leka & Cox, 2008), identified seven key features of successful workplace interventions. The seven key features suggest well-being and performance interventions should:

1. be based in theory and evidence-based practice.
2. have clear aims, goals, and tasks.
3. target relevant risk factors and groups of workers with potentially high exposure.
4. be customized for different industry sectors, occupations and specific workplaces.
5. be accessible and user-friendly for individuals at all levels of an organization.
6. be aimed at individuals and the organization.
7. facilitate the transfer of organizational competence and individual skill development independent of reliance on outside experts

In this introductory paper, based on a review of recent literature, we first focus on the first of these recommendations. We argue it is important that well-being and performance interventions in contemporary organizational contexts be based in theory as well as evidence. We then briefly comment on how theory informed the design and execution of the papers included in this special edition. Finally, we consider the challenges of defining and measuring evidence outcomes in organizations and the need to consider rigorous evaluations of the processes implicated in determining

outcomes on organizational research.

Theoretically grounded interventions

As has been widely quoted, 'there is nothing so practical as a good theory' (Lewin, 1945). However, too often research on organizational stress and well-being interventions has been focused on "*what* works and *for whom*, but not to *why* and *under what circumstances*" (Biron, Karanika-Murray & Cooper, 2012; pp. 1-2). In order to increase the probability of effective interventions it is important that proposed process and outcome variables be grounded in established theory. In support of this proposition, and drawing from Sutton and Staw (1995), Ashkenasy (2016) argued that "organization sciences cannot advance without being based in the first instance on an " interrelated set of concepts" used in turn to explain the nature of phenomena and the relationships between them". As such, theory is needed to provide guidance about the configuration of variables or constructs to be included in effective intervention research.

Numerous theories, models and frameworks have successfully been applied to well-being and performance interventions. The Job Demands-Control Model (JDC; Karasek, 1979), Job Demands-Control-Support Model (JDCS; Karasek & Theorell, 1990), the Job Characteristics Model (JCM; Hackman & Oldham, 1980), Job Demands-Resources Theory (JD-R; Bakker & Demerouti, 2014), Equity Theory (Walster, Berscheid, & Walster, 1973), and Conservation of Resources theory (COR; Hobfoll, 1989) have provided an underpinning rationale for a wide variety of interventions in a wide variety of settings (e.g., Bond, Flaxman & Bunce, 2008; Bourbonnais, Brisson, Vinet, Vézina, Abdous & Gaudet, 2008; Van Dierendonck, Schaufeli & Buunk, 1998; van Wingerden, Bakker & Derks, 2016). Van Dierendonck et al., for example, used equity theory as their theoretical framework in a 5-week, group-based intervention aimed at decreasing burnout and absenteeism among direct care professionals working with intellectually disabled clients. The main objective of the program was to reduce perceptions of inequity in the relationship with the organization and with the recipients of care by increasing the fit between the professional's goals and expectations and the actual work situation. Similarly, Bourbonnais et al. used the demand-control-support model and Siegriest's (1996)

effort-reward imbalance model as underpinning theories for their workplace intervention aimed at reducing mental health problems among care providers.

Nielsen and Randall (2013) argued that organizational interventions aimed at improving working conditions, employee health, and well-being often result in inconsistent effects despite being based on theoretical frameworks. Nielsen and Randall argued that such inconsistency indicates that intervention studies need to be designed to examine directly how and why such interventions bring about change and why they sometimes fail. Along similar lines, Bond and Bunce (2001) noted "that by identifying mechanisms of change, the efficacy of organisation-level interventions can be improved, since, practitioners can develop techniques that specifically target the crucial mediating variables" (p. 3). In contrast to Cortina's (2016) concern regarding the unnecessary addition of boxes and arrows to pre-existing models, we argue that elaborated 'box and arrow models' (Ashkenasy, 2016) can be helpful in explaining the black box mechanisms through which interventions lead to outcomes.

Black box intervention studies can potentially help explain inconsistent results in the stress and well-being intervention literatures (Nielsen & Randall, 2013). For example, although it has been well established that job autonomy can lead to engagement and performance, self-determination theory (Deci & Ryan, 2000) might suggest that interventions will only be effective for participants who have a moderate to high need for control. If study participants have a low need for control then it is unlikely that any control focused intervention will result in increased well-being and performance outcomes. As such theoretically relevant variables, such as need for autonomy, should be explicitly modeled and measured within intervention and evaluation designs to help explain effects and the absence of effects.

Lloyd, Bond and Flaxman (2013) recently argued that without an understanding of why interventions work we are unable to maximise intervention effectiveness and "cannot test and advance any theory upon which the intervention is based" (p. 182). We agree that a key issue for effective and informative interventions is to identify 'crucial mediating variables'. Additionally, rather than simply explaining effects with reference to theory, it is important to explicitly test the theories within intervention designs. To illustrate the point, even though engagement and well-being researchers

(e.g., Bakker, 2009; Salanova, Schaufeli, Xanthopoulou & Bakker, 2010) have invoked Fredrickson's (2001) broaden and build theory of positive emotions and Hobfoll's (1989) conservation of resources theory to explain how resources such as feedback, autonomy and organizational support, result in engagement, explicit tests of these theoretical explanations were not conducted. As such, constructs pertinent to self-efficacy theory (Bandura, 1977), broaden and build theory (Fredrickson, 2001), self determination theory (Deci & Ryan, 2000) and PsyCap theory (Luthans, Avolio, Avey & Norman, 2007) can potentially be further integrated into JDC, JDCS and JD-R research intervention designs to help explain the 'black box' mechanisms (Nielsen & Randall, 2013). The inclusion of such constructs might help establish and explain why, for instance, changes in job demands or resources lead to engagement, burnout or other well-being and performance outcomes.

In terms of example interventions where theory-based explanatory constructs have been explicitly modeled and measured, Lloyd, Bond and Flaxman's (2013) used a randomised control trial (RCT) to test whether psychological flexibility mediated the effect of Cognitive Behavioural Therapy (CBT) interventions (more specifically Acceptance and Commitment Therapy) on emotional burnout in a sample of government department employees working across different sites in the UK. The findings broadly supported the expectations that the CBT interventions would lead to "significant improvements in employees' emotional burnout and strain, and that increases in psychological flexibility mediated the improvements observed in the exhaustion component of burnout" (p. 194). Similarly, van Wingerden, Bakker and Derks (2016) set out to explicitly test the underlying JD-R theoretical proposition that work engagement mediates the influence of job demands, job resources and personal resources on performance. van Wingerden et al.'s intervention included exercises aimed at improving personal resources in the form of hope, optimism, resilience and self-efficacy (PsyCap; Luthans, Avolio, Avey & Norman, 2007) and exercises to help participants to increase their social job resources, structural job resources, and challenging job demands through job crafting. van Wingerden et al. reported significant differences between the intervention group and the control group for PsyCap, job crafting behavior, work engagement, and in-role performance. The Lloyd et al. and the van Wingerden et al. studies combined theoretically grounded and validly measured constructs to advance practical understanding of 'what works and

why' with respect to organizations better managing employee health and well-being. Without "clear evidence on what could be done to successfully prevent work-related stress and promote well-being, it is difficult for employers to know how to implement effective interventions that will produce the intended results." (Biron, Karanika-Murray & Cooper, 2012; p. 1).

To conclude this section of the introduction, we argue in support of interventions that are theoretically grounded and use validly measured constructs to advance practical understanding of how to help organizations better manage employee well-being and performance. Even though it may often be impractical to conduct randomized controlled trials in organizational contexts (Mathieu, 2016), interventions at least should be based on good theory. We agree with Sutton and Staw (1995) who argued that "strong theory, in our view, delves into underlying processes so as to understand the systematic reasons for a particular occurrence or nonoccurrence. It often burrows deeply into microprocesses" (p. 378). Notwithstanding the value of randomised control trials for measuring the effectiveness of interventions, in applied settings where politics, pragmatics, process and context factors can get in the way of any strictly controlled intervention design (Nielsen & Randall, 2013), "the standards used to evaluate how well it is tested or grounded need to be relaxed" (Sutton & Staw, 1995; p. 382). Process evaluation may well be equally as important in explaining the effectiveness of organization health and wellbeing interventions as is outcome evaluation (Craig, Dieppe, Macintyre et al, 2008).

The empirical studies included in this Special Issue were conducted in four different countries, namely Denmark, USA, Canada and Switzerland and involved different occupational groups. The studies vary significantly in terms of scope and focus. They include short individually focused interventions and large-scale organizational/team level interventions with implementation periods extending over a year. All are firmly based in theory, incorporate pre and post measures, and to some extent, engage with process issues as well as with outcomes.

In "Improving primary task quality; effects on well-being, health and performance" Sorensen et al. report on a large scale organizational intervention involving 1800

teachers working in pre-school units across Denmark. Influenced by the positive influence of employee participation on facilitating successful organizational change, Sorensen et al. attempt to measure the intensity to which employees participate and engage in an organizational intervention process designed to improve task performance and its impact on organizational effectiveness and employee health. This ambitious and wide ranging study involved the participation of a large number of stakeholders including regional government, parents, consultants and researchers as well as employees. A notable strength of the study was that it utilised a randomised control trial (RCT) design. The study clearly demonstrates that optimal intervention outcomes are strongly linked to the degree of effort, time and engagement expended by the participants in the intervention. Furthermore, it highlights that the form and content of interventions needs to be tailored and adapted to suit the individual needs and culture of the organization and its employees.

Whilst the principles of employee participation have a long history, the article by Mills et al. entitled "Development and implementation of a multifaceted well-being intervention" draws on a more recent theoretical framework and is rooted in positive psychology. The researchers investigate the impact of a relatively short facilitated well-being programme designed to improve both hedonic (HWB) and eudaimonic (EWB) well- being situated within Fredrickson's broaden and build theory. The programme was delivered to 23 self-selected participants from the Midwest United States and included a larger similarly matched control group (n= 53). The facilitated session was supplemented with follow up emails. The study incorporated standardised measures of EWB and HWB administered pre and 2 weeks post session. Whilst the intervention had no impact on HWB, EWB did improve.

Fulleman et al.'s study, "The relevance of intervention participants' process appraisal for change in well- being and lean work processes of entire teams", investigates the impact of the introduction of leaner work processes on the well-being of health workers in a Swiss hospital. According to Womack and Jones (1996) the essence of the lean management approach is to enhance the efficiency, productivity and quality of an organization by reducing any "wasted" human activity that absorbs resources but creates no value to customers/service users. Again, lean management has a long history and its principles have been applied extensively in the manufacturing industry

but less so in European healthcare settings. The study focuses on process issues, particularly the attendant team members (n=180) perceptions of the quality of the workshops delivered to launch and support the intervention and expectations as to whether the workshops and the related action plans would achieve a positive change. The data were then analysed alongside wider pre and post intervention data collected from employees (n=203) working in the 29 nursing wards involved in a change initiative. Fulleman and colleagues reported that the appraisal of workshop quality by team representatives related to enhanced affective well-being in entire teams but did not impact on the successful implementation of action plans and leaner work processes. In contrast, positive outcome expectancies were associated with successful implementation and leaner work processes but had no impact on the improvement of well-being. The authors conclude that the monitoring of process indicators in the early stages of a change intervention is important to ensure that optimal organizational effectiveness and employee well-being outcomes are achieved.

In "Respect in the Workplace" Smith and Kelloway present their findings on the impact of a short 90 minute interactive on line training programme addressing the growing problem of workplace abuse and incivility on Canadian care workers. Ninety-two employees participated in the training and 73 formed the wait list control group. A variety of standardised measures were administered to the experimental and control group at three time points – pre-training, 6-7 weeks and 10-11 weeks post training. Although the training was well received, the demonstrated impacts were modest. Participants who reported in engaging in some level of incivility prior to the intervention reported a significant increase in self-efficacy and increased perceptions of civility. Furthermore, the intervention promoted a greater awareness of incivility more widely.

As has been argued (Biron et al., 2012) interventions can fail to achieve desired outcomes because the underlying assumptions about the intervention were wrong (theory failure) or because the intervention was unsuccessfully implemented (programme failure). Organizational level interventions have the greater potential for positive and more enduring effects (Biron, Cooper & Bond, 2009) than individually focused interventions. However, such interventions are more costly to implement, require more planning and effort and are more likely to be affected by the dynamic

and complex interplay of contextual variables such as organizational culture, politics, management support and competing demands (Noblet & LaMontagne, 2009). Both Sorensen et al. and Fulleman et al. emphasise the importance of the positive engagement and motivation of those individuals leading the implementation of the intervention and their ability to involve and somehow transfer their positivity to other employees. In contrast to individually focused interventions, a successful organizational intervention is less easy to transfer from one organizational setting to another because of their "bespoke" nature. Hence the preference for and proliferation of individually targeted health and well-being interventions, as confirmed by the systematic reviews conducted in this field (e.g., Van der Hek & Plomp, 1997).

As organizations continue to look for cost effective ways to improve workplace health and well-being, on line training programmes like the Respect programme address this need. As argued by Smith and Kelloway et al., this is particularly so if they are targeted at individuals who are likely to benefit the most from such training. However, as Smith and Kelloway point out, the benefits of on line training programmes may not be fully realised if the participants lack basic computing skills, are not provided with appropriate technological support, or are completing the training in a distracting environment.

The inclusion of the Mills et al. study reflects the growing interest in the application of positive psychological principles and theories in the workplace and the change in discourse from stress and ill health to positive emotions and well-being. However, the translation and adaptation of well-being programmes developed in non-work settings to the workplace is still in development. As Mills et al. acknowledge the characteristics of their self-selected training group are likely to have made them more receptive to this kind of intervention compared to other occupational groups. Intervention research continues to present a range of challenges. However, the increasing focus on process issues is encouraging. The tension between the demands for academic rigour in the conduct and evaluation of inventions and the pressure from organizations to be "seen to be doing something" about employee health – quickly and cost effectively – will no doubt remain difficult to resolve. The studies in this Special Issue show there is a continuing need for academics and practitioners to

conduct applied research that utilise financial metrics to demonstrate a strong business case for investing in employee health and well-being.

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